Message

From: Robinson, Valois [Robinson.Valois@epa.gov]
Sent: 5/4/2020 4:27:46 PM
To: Chin, Lucita [Chin.Lucita@epa.gov]
Subject: RE: [EXT] Cadmus response to Question about comment summary 4.4 - Sorry – I thought I had sent this email already!

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Ex. 5 AC/DP

Thanks!
Valois

Valois Robinson
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From: Chin, Lucita <Chin.Lucita@epa.gov>
Sent: Monday, May 4, 2020 8:56 AM
To: Robinson, Valois <Robinson.Valois@epa.gov>
Subject: RE: [EXT] Cadmus response to Question about comment summary 4.4

Ex. 5 AC/DP

Lucita Chin
Senior Assistant Regional Counsel | Office of Regional Counsel | Media Law Counseling Section
Environmental Protection Agency Region 8 | 1595 Wynkoop St. | Mail Code: 8ORC-LC-M | Denver, CO 80202
Office: (303) 312-7832

From: Robinson, Valois <Robinson.Valois@epa.gov>
Sent: Saturday, May 2, 2020 5:43 PM
To: Chin, Lucita <Chin.Lucita@epa.gov>
Subject: FW: [EXT] Cadmus response to Question about comment summary 4.4

Hi Lucita,
Here is the response I received back from Cadmus related to summary 4.4:
Comment summary 4.4 in the RtC includes the statement *One commenter recommended specific analytical methods that the EPA should require the Permittee to employ.*
We were wondering if you can let us know who made that comment and what was the analytical method recommended?

The comment is from by Ex. 6 Personal Privacy (PP) of Defenders of the Black Hills Recommendation: The EPA should require research with the aid of electron microscopes and mass spectrometers to ascertain the presence of Uranium isotopic ratios and Tritium that are characteristic of the Dewey-Burdock area and their presence in wells in the James River area of Eastern South Dakota. This would show if such elements have already traveled from the Dewey-Burdock Uranium mining area to the Eastern side of South Dakota. Of course, other radioactive pollutants should also be studied as well, particularly the naturally-occurring daughter products of Uranium 238. If the studies show that radioactive polutants have already traveled to Eastern South Dakota via the aquifers through old, traditional mining practices, then the information would raise the question of how much more pollution would travel in the ground-water with ISR mining whose process directly affects groundwater. Such a study needs to occur prior to any consideration for an ISR mining operation anywhere in the Black Hills. ISR mining would impact the quality of ground water much more extensively than old open-pit mining.

Ex. 5 AC/DP

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From: Shari Ring <Shari.Ring@cadmusgroup.com>
Sent: Thursday, April 30, 2020 10:55 AM
To: Robinson, Valois <Robinson.Valois@epa.gov>; MaryEllen.Tuccillo@cadmusgroup.com
Subject: RE: [EXT] Question about comment summary 4.4

The comment was submitted by Ex. 6 Personal Privacy (PP) of Defenders of the Black Hills (a 2019 comment, which is excerpted below):

3. Chemical reactions within the flow system occur in the moving fluid-ground water. The chemical evolution within the system can be utilized to understand the flow better."
This is the very idea behind ISR mining and the proposal by Powertech/Azarga. South Dakota School of Mines and Technology Professor Perry Rahn in a paper presented to the South Dakota Academy of Science adds:

"The chemistry of groundwater at an abandoned ISL uranium mine will be changed from its pre-mine condition. The amount of chemical change and the groundwater velocity downgradient from the mined site are important for any environmental assessment. The chemistry of this water will be greatly altered. Elements such as uranium, radium, and selenium will be dissolved by chemicals during the mining operation. These elements originally were bound up within the Inyan Kara aquifer as solid minerals. Solution mining will set them free as dissolved constituents in the groundwater. Their concentration and mobility within the aquifer is uncertain. The ultimate fate of groundwater contaminants from an ISL uranium mine depends on the groundwater velocity and the natural attenuation that could immobilize contaminants such as uranium and selenium."

Perry Rahn, "Permeability of the Inyan Kara Group in the Black Hills Area and Its Relevance to a Proposed In-Situ Leach Uranium Mine", Proceedings of the South Dakota Academy of Science, Vol. 93 (2014) p. 28

Recommendation: The EPA should require research with the aid of electron microscopes and mass spectrometers to ascertain the presence of Uranium isotopic ratios and Tritium that are characteristic of the Dewey-Burdock area and their presence in wells in the James River area of Eastern South Dakota. This would show if such elements have already traveled from the Dewey-Burdock Uranium mining area to the Eastern side of South Dakota. Of course, other radioactive pollutants should also be studied as well, particularly the naturally-occurring daughter products of Uranium 238. If the studies show that radioactive polutants have already traveled to Eastern South Dakota via the aquifers through old, traditional mining practices, then the information would raise the question of how much more pollution would travel in the ground-water with ISR mining whose process directly affects groundwater. Such a study needs to occur prior to any consideration for an ISR mining operation anywhere in the Black Hills. ISR mining would impact the quality of ground water much more extensively than old open-pit mining.

As most of the water use in western and much of eastern South Dakota, and especially in this proposed ISR mining activity is tapped into the groundwater, it would behoove the protection of all groundwater. As stated by the U.S. Environmental Protection Agency in EPA/625/R-93/002, February 1993, "Wellhead Protection: A Guide for Small Communities, p. 18:

"Well protection emphasizes the prevention of drinking water contamination as a principal goal, rather than relying on correction of contamination once it occurs..."

Because of the above stated reasons and recommendation on the groundwater alone, the well permits and aquifer exemption must NOT be granted as any disturbance by radioactive pollution will have a far reaching and long lasting effect that would precipitate a system-wide ecological reaction of unpredictable scope and dimension for thousands of years.

From: Robinson, Valois <Robinson.Valois@epa.gov>
Sent: Thursday, April 30, 2020 10:52 AM
To: Mary Ellen Tuccillo <maryellen.tuccillo@cadmusgroup.com>; Shari Ring <Shari.Ring@cadmusgroup.com>
Subject: [EXT] Question about comment summary 4.4

Hello again after so long! I hope you all have adjusted to this new situation. We are moving forward with the RtC. I have a question I hope you can locate the answer for in the larger comment document:

Comment summary 4.4 in the RtC includes the statement *One commenter recommended specific analytical methods that the EPA should require the Permittee to employ.*
We were wondering if you can let us know who made that comment and what was the analytical method recommended?

Also, our attorney who is working on the tribal consultation responses to comments would like to have all the emails sent to the tribes. I am not able to get to the Cadmus SharePoint site anymore. I asked Dan Salvatore about it a while back & he tried to fix it, but it still doesn't work for me & I am reluctant to bother him again. Could Galen email me the pdfs of all the emails in which the letters were sent to the tribes, please? I hope there are enough hours left for that. If not, please let me know.

We finally found out we are getting some additional money from EPA HQ! I just this morning updated Amendment 3 to the current WA to reflect the hours that I hope match the amount of money we are receiving.

Mary Ellen, I hope you receive the "track changes" version of the Amendment 3 so you can go right to the changes in the document for updating the Work Plan. If not, please let me know & I will send it to you.

It is nice to be back in communication!

My supervisor has asked me to send you the two tasks I have identified so far where we need the additional technical assistance under the new task in amendment 3 so you can estimate how many hours you need to get them done. One is the organified metals comment and the second will be evaluating and reconciling all the comments about the groundwater velocity in the aquifers. Should I wait until Amendment 3 is in place to send this? The estimation task is covered in Amendment 3, but not in the current WA. I think you have all the info you need for the organified metals topic, but if not please let me know. I still need to put together all the info for the second topic.

Thanks very much!

Valois

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